State Revolving Fund Loan Programs
Drinking Water, Wastewater, Nonpoint Source

ENVIRONMENTAL ASSESSMENT
AND
FINDING OF NO SIGNIFICANT IMPACT

JACKSON COUNTY WATER UTILITY, INC.
IMPROVEMENTS TO SUPPLY, TREATMENT, STORAGE AND DISTRIBUTION
SRF PROJECT DW08 04 36 01

DATE: January 12, 2009

TARGET PROJECT APPROVAL DATE: February 12, 2009

I. INTRODUCTION

The above entity has applied to the Drinking Water State Revolving Loan Fund (SRF) for a loan to finance all or part of the drinking water project described in the accompanying Environmental Assessment (EA). As part of facilities planning requirements, an environmental review has been completed which addresses the project's impacts on the natural and human environment. This review is summarized in the attached EA.

II. PRELIMINARY FINDING OF NO SIGNIFICANT IMPACT (FNSI)

The SRF Drinking Water Program has evaluated all pertinent environmental information regarding the proposed project and determined that an Environmental Impact Statement is not necessary. Subject to responses received during the 30-day public comment period, and pursuant to Indiana Code 4-4-11, it is our preliminary finding that the construction and operation of the proposed facilities will result in no significant adverse environmental impact. In the absence of significant comments, the attached EA shall serve as the final environmental document.

III. COMMENTS

All interested parties may comment upon the EA/FNSI. Comments must be received at the address below by the deadline date above. Significant comments may prompt a reevaluation of the preliminary FNSI; if appropriate, a new FNSI will be issued for another 30-day public comment period. A final decision to proceed, or not to proceed, with the proposed project shall be effected by finalizing, or not finalizing, the FNSI as appropriate. Comments regarding this document should be sent within 30 days to:

Max Henschen
Senior Environmental Manager
State Revolving Fund -- IGCN 1275
100 N. Senate Ave.
Indianapolis, IN 46204
317-232-8623

ENVIRONMENTAL ASSESSMENT

I. PROJECT IDENTIFICATION

Project Name and Address:	Jackson County Water Utility 1119 W. Spring Street Brownstown, IN 47220 -0056
SRF Project Number:	DW 08 04 36 01
Authorized Representative:	Richard Tomoehlen, President JCWU Board of Directors

II. PROJECT LOCATION

The Jackson County Water Utility (JCWU) serves approximately 5,200 customers in Jackson County and portions of Jennings, Lawrence, Bartholomew and Brown counties (Figure 1). The proposed projects are all in Jackson County. The Acme water main replacement project is in the Brownstown Quadrangle, T6N, R4E, Brownstown Township, sections 16, 21 and 28; and Hamilton Township, sections 9 and 10 (Figure 2). The Wiesehan Road water main replacement project is in the Waymansville Quadrangle, Hamilton Township, T7N, R5E, Sections 19, 30 and 31 (Figure 3); Wiesehan Road is also known as CR 100 E. The water treatment plant (WTP) improvements, new maintenance building, new raw water supply well and the new 16-inch transmission water main across the East Fork White River are in the Brownstown Quadrangle, Brownstown Township, T5N, R4E, Sections 10 and 11 (see Figure 4). The Crane Hill water tank security improvements project is in the Seymour Quadrangle, Brownstown Township, T5N, R5E, Section 5 (see Figures 5 & 6).

III. PROJECT NEED AND PURPOSE

The **two water main replacements** on Acme and Wiesehan roads are needed to replace aging PVC water mains which have deteriorated, leading to main breaks and interruptions in service; the replacement projects will increase distribution system reliability and decrease service interruptions.

The **new 16-inch transmission line** from the treatment plant to a connection across the East Fork White River will provide a backup, in case the existing 12-inch line breaks; approximately 2,400 customers in the Acme, Clearspring and Freetown networks would be out of water should such an event occur. The increased size of the new line will allow the utility to accommodate future growth.

The **proposed clearwell** (i.e., storage tank) will address the undersized 85,000 gallon clear well, which can be emptied in approximately 34 minutes of its finished water. A new clearwell will provide water when the plant is inactive during filter media replacement or catalytic reactor descaling. It will also contribute to waterworks reliability, in case the normal finished water supply is unexpectedly interrupted; other finished water storage in the system is provided by three standpipes and four elevated water storage tanks, two of which will be abandoned. The proposed clearwell would be piped to operate either in parallel with the existing clear well or separately.

The **new maintenance and repair building** will allow for storage of maintenance equipment and inventory and will allow field personnel to operate more effectively.

There are currently seven wells. Wells 1 and 2 will be abandoned. Wells 3, 5 and 7 are excellent wells, although 3 and 5 have deteriorated due to their approximate 47-50 year age, exceeding the normal 40-year useful life of a well. With the best well out of service, the effective capacity of the well field is 1,750 gpm. **The proposed well** will increase supply to meet the current rated 2,000 gpm capacity of the water treatment plant. The new well will produce the same quantity of water that is being produced by two wells that have seen a reduction in production in the last several years.

The **Crane Hill storage tank, booster station and water treatment plant security improvements** will provide protection against vandalism.

IV. Project Description

The **Acme water main replacement project** will replace 23,185 feet of 8-inch PVC pipe with 10-inch ductile iron water main.

The Wiesehan Road water main replacement project will replace 9,000 feet of 8-inch PVC water main with 8-inch ductile iron water main.

The White River crossing and transmission line project will install 3225 feet of 16-inch ductile iron water line; approximately 550 feet of the line will be directionally bored under the river.

The **water treatment plant improvements project** will construct a 750,000 gallon steel above-ground clearwell, modify the backwash tank to a recarbonation tank, install a 2,000 gallons per minute (gpm) transfer pump and upgrade electrical and piping systems. The new clearwell will be approximately 50 feet in diameter and 55 feet in height.

The **maintenance building project** will construct pole barn with maintenance bays, office areas and restroom.

The **raw water well project** will install a new 500 gpm groundwater well and 280 feet of raw water main in the utility's well field between the WTP and East Fork White River and east of Ewing Road; wells 1 and 2 will be abandoned.

If funds permit, the **security improvements project** will install security fencing at the Crane Hill storage tank and security cameras at booster stations and the water treatment plant.

V. Estimated Project Costs, Affordability and Funding

A. Selected Plan Estimated Cost Summary

Construction Costs:	
Acme Water Main Replacement	$ 840,748
Wiesehan Road Water Main Replacement	255,700
Backup Transmission Main Across White River	295,803
Water Treatment Plant Improvements (clearwell)	900,000
Maintenance Building	190,000
Raw Water Well & Raw Water Main	125,000
Construction subtotal	$2,607,251
Contingency	183,749
Construction Cost	**$2,791,000**
Non-Construction Costs	
Engineering Fees Design	$ 235,000
Construction Observation	82,000
Bond Counsel	55,000
Legal	50,000
Rate Consultant & Financial Advisor	70,000
SRF Bond Counsel	10,000
Archaeological & Environmental Studies	5,000
Administrative & Miscellaneous	2,000
Non-Construction Cost	**$ 509,000**
Total Estimated Project Cost	**$3,300,000**

Security Improvements (if sufficient funds remain after substantial completion of the rest of the project): $80,000.

B. Jackson County will finance the project with a 20-year loan of approximately $3,300,000 from the State Revolving Fund (SRF) Loan Program at an interest rate to be determined at the time of loan closing. Monthly user rates and charges may need to be analyzed to determine if adjustments are required for loan repayment.

VI. Description of Evaluated Alternatives

Water Main Replacement Projects: The no-action alternative for the water main replacement projects would require that the utility continue to repair these water mains, which would be expensive and would not resolve the problem of pipe deterioration; eventually, they would have to be replaced. The no-action alternative was rejected. The selected alternative for the Acme Road project will install a larger pipe which will save pumping costs by reducing friction losses and improve water service to approximately 500 residential customers and Rose Acre farms. The selected alternative for the Wiesehan Road water main project will replace a leaking pipe and provide better service to customers.

WTP Improvements: The no-action alternative for the WTP improvements (i.e., new clearwell) would require that the plant continue to operate in the current manner and be unable to provide a reliable treated water supply in the event of an interruption in plant operation. Therefore, this alternative was rejected in favor of providing additional finished water storage at the WTP.

New Maintenance Bldg: The no-action alternative would not address the Utility's insufficient inventory space and maintenance area. The no-action alternative was rejected in favor of a new building.

Backup Transmission Main: The no-action alternative for the backup transmission main across East Fork White River would mean that many customers would be at risk of interrupted supply if the current transmission main were to break during the typical annual spring flooding that occurs over that main; the no-action alternative would also not address future growth in the Acme, Clearspring and Freetown service areas. The no-action alternative was rejected in favor of a new, larger main.

New Well and Raw Water Main: The no-action alternative would not allow the plant to operate at its rated capacity and would not provide a reliable raw water supply; this alternative was rejected in favor of installing a new well and raw water main.

VII. Environmental Impacts of the Feasible Alternatives

A. Direct Impacts of Construction and Operation

Undisturbed/Disturbed Land: Construction corridor width for pipe installations will be approximately 10 feet. Portions of the Acme water main project, the backup transmission main across White River project and the new well/raw water main project will affect undisturbed (e.g., agricultural) land. The other projects will not affect land which has not been significantly disturbed by previous construction activity. Two archaeological surveys have been conducted on such undisturbed land of possible archaeological significance. These surveys did not produce significant archaeological finds.

Structural Resources (Figures 7, 8 & 9): The Acme water main replacement project will terminate on its northern route just west of the Acme Episcopal Cemetery at the southwest corner of S.R. 258 and CR 100 West. The church is located on the northwest corner. The Durland Cemetery is near the Crane Hill water tank, where the utility will make security improvements, if funds remain after the other projects have been implemented. The security work will not affect the cemetery. The projects will not affect historic sites or districts. Audible, atmospheric or visual effects of the projects will be temporary. The SRF's finding pursuant to Section 106 of the National Historic Preservation Act is: "no historic properties affected."

Surface Waters and Wetlands (Figures 2, 3, 4 [surface waters]; 10, 11, & 12 [wetlands]): The Acme water main project will cross five ephemeral streams and one perennial stream, using open cut. All are tributaries of Spray Creek, which discharges into White Ditch (shown on older topographic maps as Oathout Ditch), a tributary of East Fork White River. Three of the streams are designated as forested wetlands on the National Wetlands Inventory map. The Wiesehan Road water main project will cross by open cut three ephemeral streams and a perennial stream that is designated as a riverine wetland; these streams are tributary to White

Ditch. Neither the Acme water main project nor the Wiesehan Road project will require tree removal at stream crossings. The staging areas for the directional bore pit and receiving pit under East Fork White River will not be placed in the forested wetlands bordering the river. None of the other projects will affect wetlands.

100-Year Floodplain (Figures 13 & 14): The 16-inch backup transmission line from the WTP across East Fork White River will lie entirely in the 100-year floodplain, but will not affect it. The new well structure and motors will also be in the 100-year floodplain; they will be constructed 3 feet above the 100-year flood elevation. The WTP is adjacent to the 100-year floodplain, but the clearwell and maintenance building will be constructed just outside of the floodplain. None of the other projects are located in the 100-year floodplain.

Groundwater: None of the proposed projects will negatively affect a sole source aquifer or other groundwater resources.

Plants and Animals: Two or three mature trees may require removal to install the Acme water line replacement, but no trees at creek crossings will be removed. None of the proposed projects will affect endangered plants or animals.

Prime Farmland: The well construction will directly convert approximately 0.05 acres of prime/unique farmland.

Air Quality: Air quality will be temporarily impacted by construction activities, including vehicle exhaust and dust.

Open Space and Recreational Opportunities: None of the proposed projects will create or destroy open space and recreational opportunities.

The proposed projects will not affect National Natural Landmarks.

B. Indirect Impacts

The utility's Preliminary Engineering Report (PER) states: *The Jackson County Water Utility through the authority of its utility board, will ensure that future development, as well as future supply, storage, distribution, or treatment works projects connecting to SRF-funded facilities will not adversely impact archaeological/historical/structural resources, wetlands, wooded areas, or other sensitive environmental resources. The Water Utility will require new development and treatment works projects to be constructed within the guidelines of the U.S. Fish and Wildlife Service, IDNR, IDEM, and other environmental review authorities.*

C. Comments from Environmental Review Authorities

The Natural Resources Conservation Service, in correspondence dated March 11, 2008, noted that the proposed projects would directly convert 0.05 acres of prime/unique farmland and indirectly convert 42.65 acres along the Acme water main route.

The IDNR Division of Historic Preservation and Archaeology (DHPA) commented on archaeological survey work on the Acme and Wiesehan roads and backup water mains projects and on the potential of the projects to affect historic structural resources. In correspondence dated October 2, 2008 the DHPA stated: *Based on our analysis, it has been determined that*

no historic properties will be altered, demolished, or removed by the proposed project. We concur with the archaeological report that no further archaeological investigations are necessary....If any archaeological artifacts, features, or human remains are uncovered during construction, state law (Indiana Code 14-21-1-27 & 29) requires that that the discovery must be reported to the Department of Natural Resources within two (2) business days. Further archaeological work was necessary on the Acme water main route and in the area of the proposed new well and its raw water main;. the IDNR Division of Historic Preservation and Archaeology has not yet commented on that survey, which did not find significant archaeological materials.

This document is the first notice for comment from the U.S. Fish and Wildlife Service and the IDNR Environmental Unit.

VIII. Mitigation Measures

The utility's PER states: *Precautions shall be taken during construction to prevent erosion and sediment transport. Efforts shall be made during construction to minimize disturbance of the creek/wetland areas. Efforts will be made to restore creek banks to existing conditions and rip rap fill will be minimized. Mitigation measures to lessen and compensate for wetland impacts cited in comment letters about the project from the Indiana Department of Natural Resources and the U.S. Fish and Wildlife Service will be implemented. Project plans shall include requirements for construction sequencing and both temporary and permanent erosion control measures. All disturbed areas shall be restored to their pre-construction condition. All vegetated lands shall be permanently seeded and maintained as necessary until vegetation growth is established. If dewatering is necessary, water shall be pumped through a filter bag prior to discharge into a swale or storm sewer. All mitigating measures recommended by reviewing authorities shall be implemented for this project. A Rule 5 permit is required through the Indiana Department of Environmental Management for Construction/Stormwater Pollution Prevention. This plan shall be approved by the Jackson County Soil and Water Conservation District. The County SWCD will routinely inspect the construction area to ensure that appropriate measures are taken to minimize erosion and sediment transport off-site.*

IX. Public Participation

A properly noticed Public Hearing was held on May 20, 2008 at 7:30 pm at the Jackson County Utility Office at the WTP. There were no written comments received by the utility during the 10-day comment period following the public hearing.

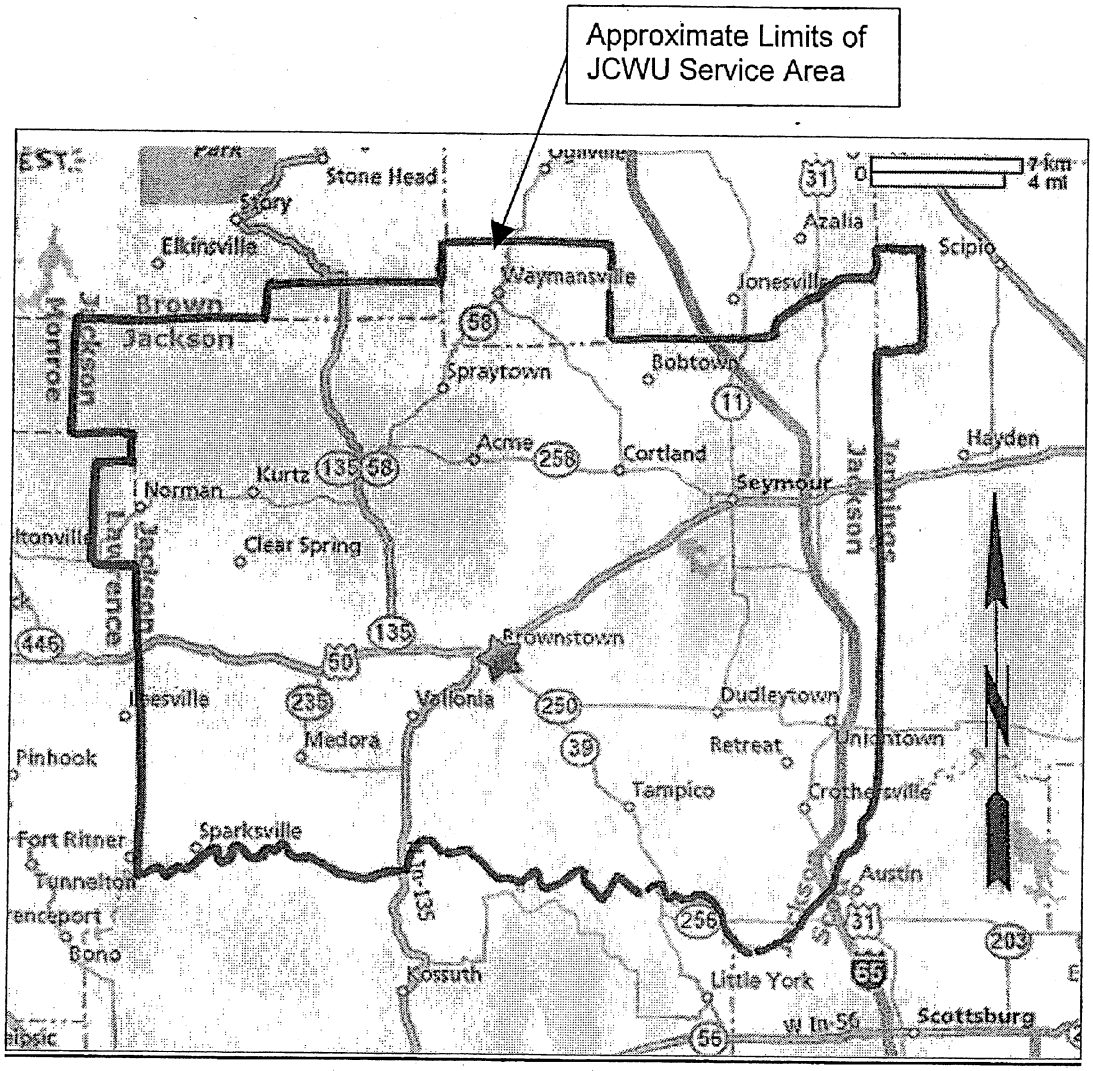

FIGURE 1: Jackson County Water Utility, Inc. Existing Service Area
(Service Area Excludes the Town of Medora, Town of Crothersville and City of Seymour)

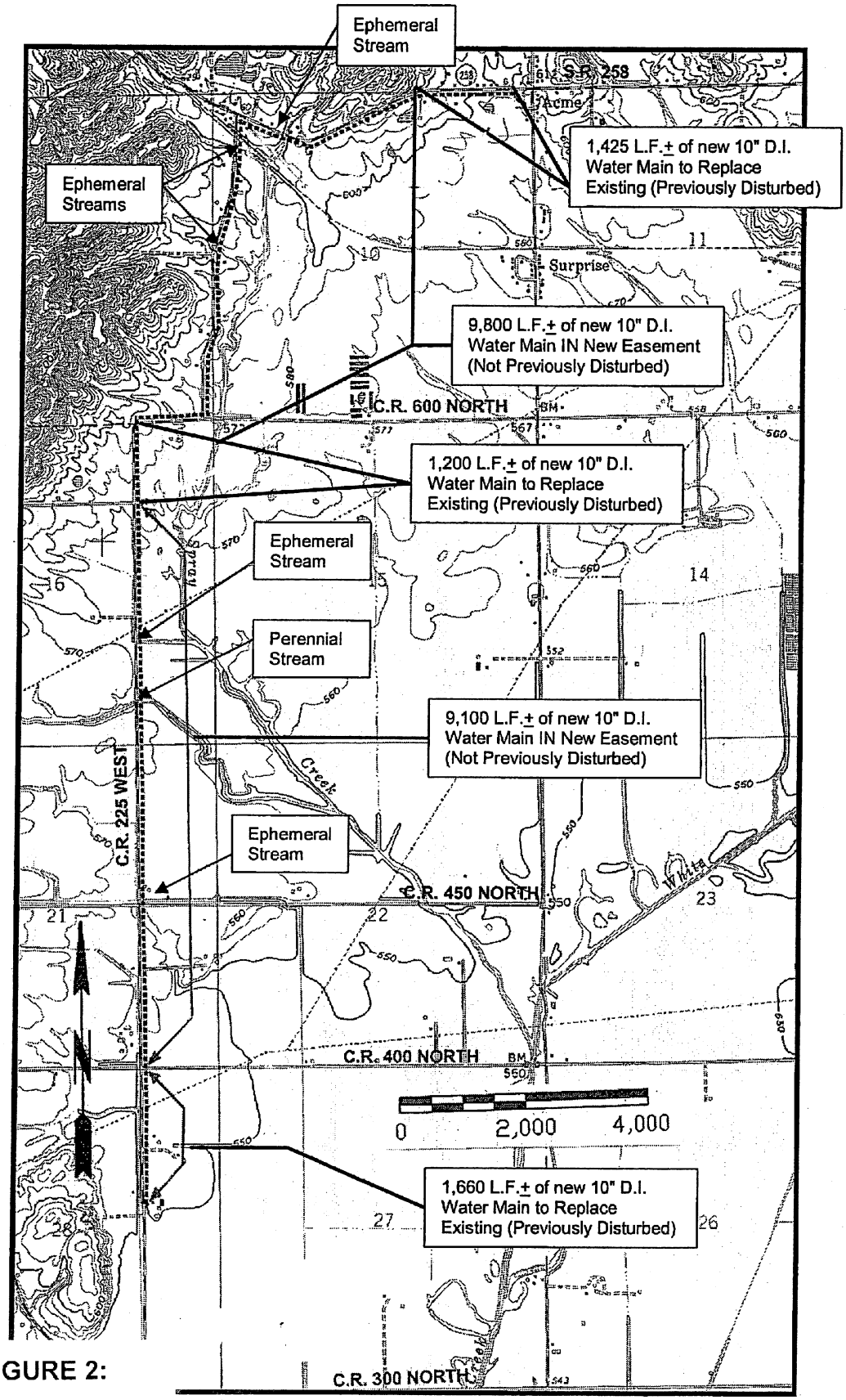

FIGURE 2:

Project Location Map: Acme Water Main

Map Source: Brownstown, Indiana USGS Quadrangle, Rev. 1994

Hamilton Township, T6N, R4E, Sections 9 & 10

Brownstown Township, T6N, R4E, Sections 16, 21 & 28

Revised 9/18/2008

Revised 12/9/2008

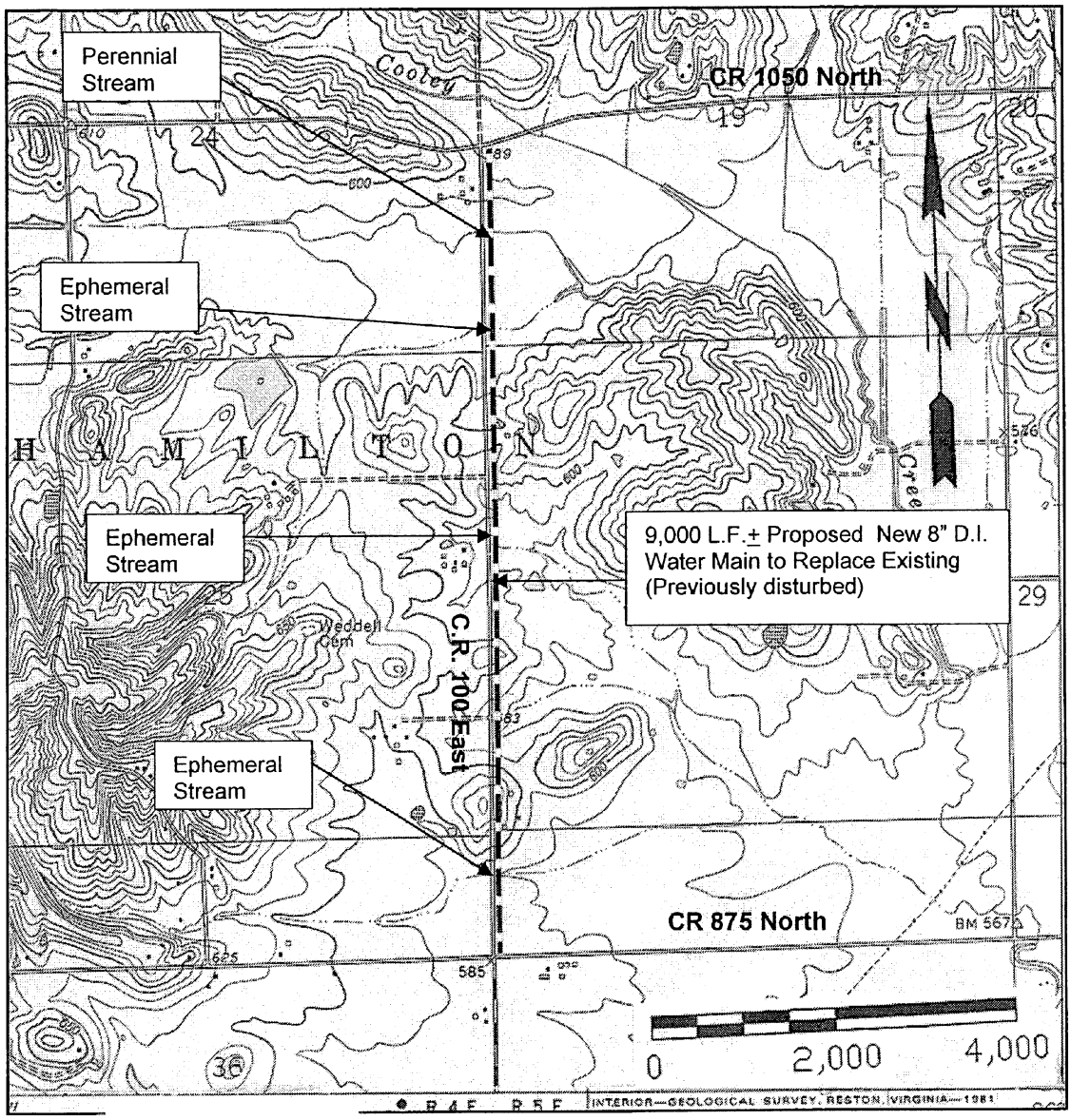

FIGURE 3:

Project Location Map: Wiesehan Road (CR 100 East) Water Main
Map Source: Waymansville, Indiana USGS Quadrangle, Rev. 1981
Hamilton Township, Jackson County, R5E, T7N, Sections 19, 30 & 31

Revised 9/18/2008

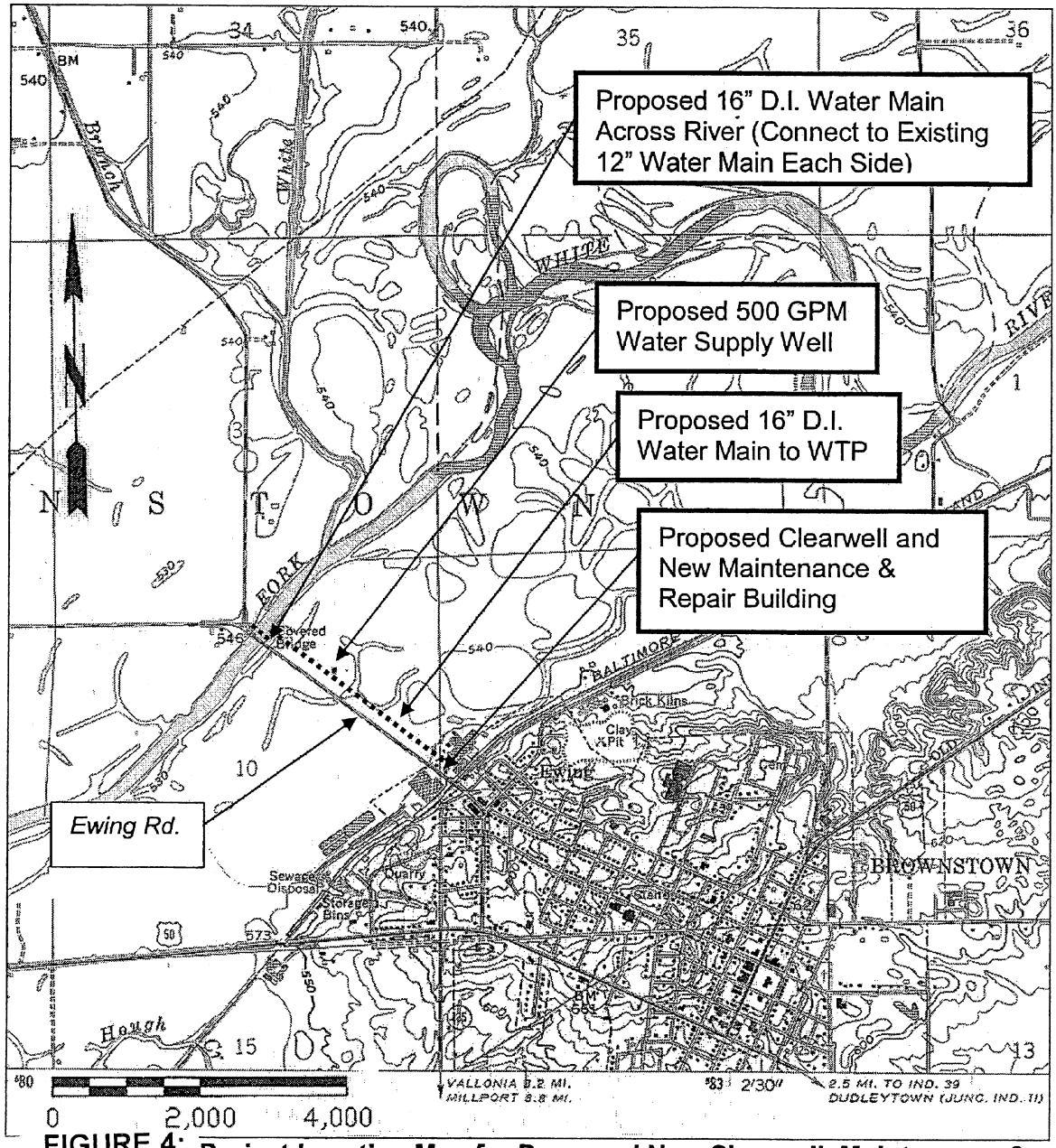

FIGURE 4: Project Location Map for Proposed New Clearwell, Maintenance & Repair Building, New 500 gpm Water Supply Well & Proposed 16" Water Main Across the East Fork White River

(Map Source: USGS Quadrangle Map for Brownstown, IN, Rev 1984)
Brownstown Township, Jackson County, Range 4 East, Township 5 North, Sections 10 & 11

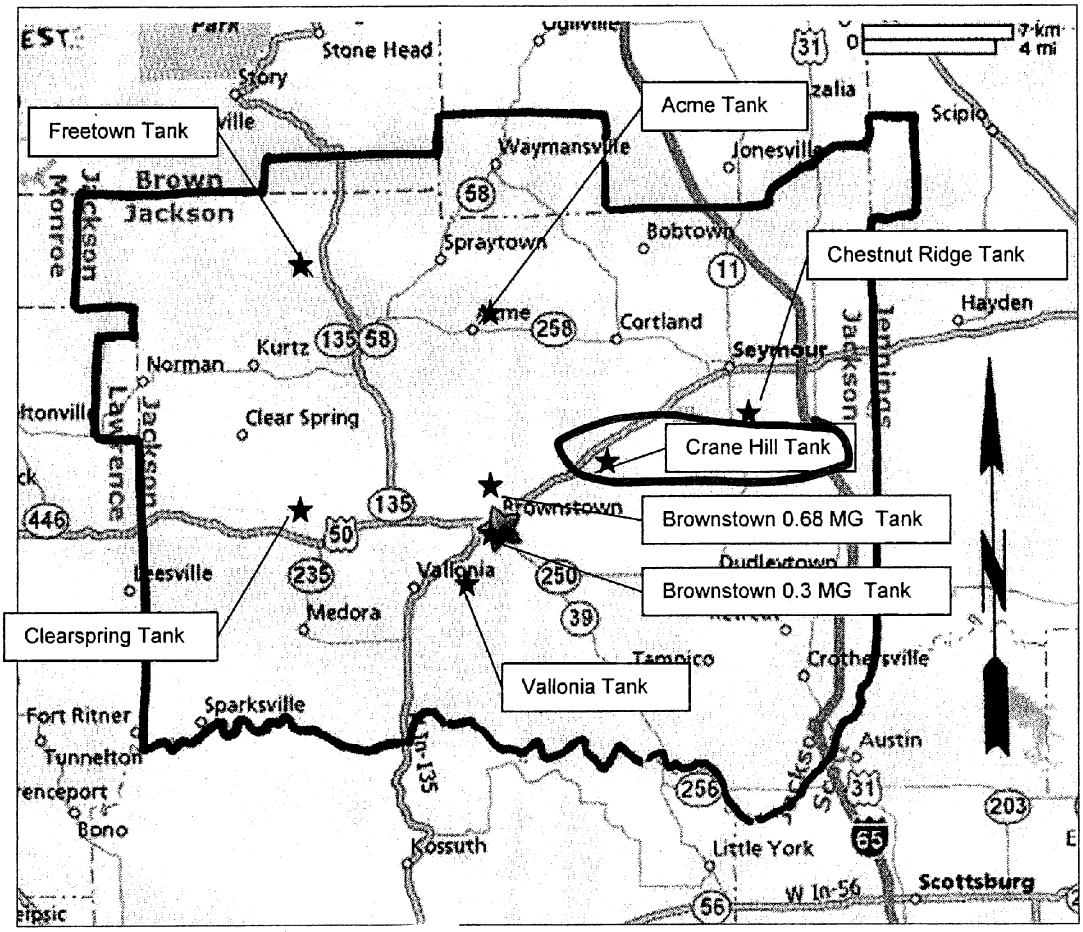

FIGURE 5: Water Tank Location Map
(Map Source: Mapquest.com)

New perimeter security fencing is recommended for the Crane Hill water storage tank.

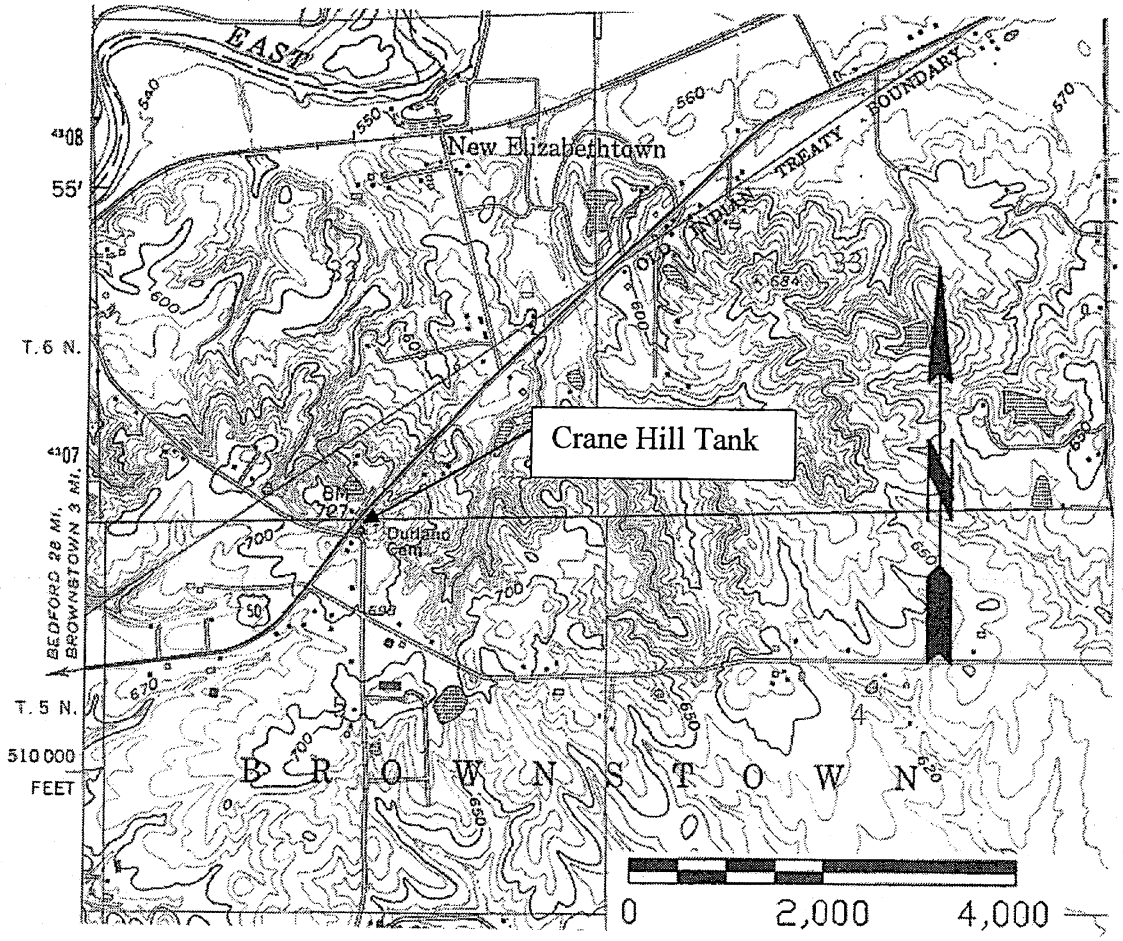

FIGURE 6:

Location Map: Crane Hill Water Storage Tank
Map Source: Seymour, Indiana USGS Map, Revised 1994
Seymour Quad, T5N, R5E, Section 5; Brownstown Township.

Hamilton Township (05001-016)

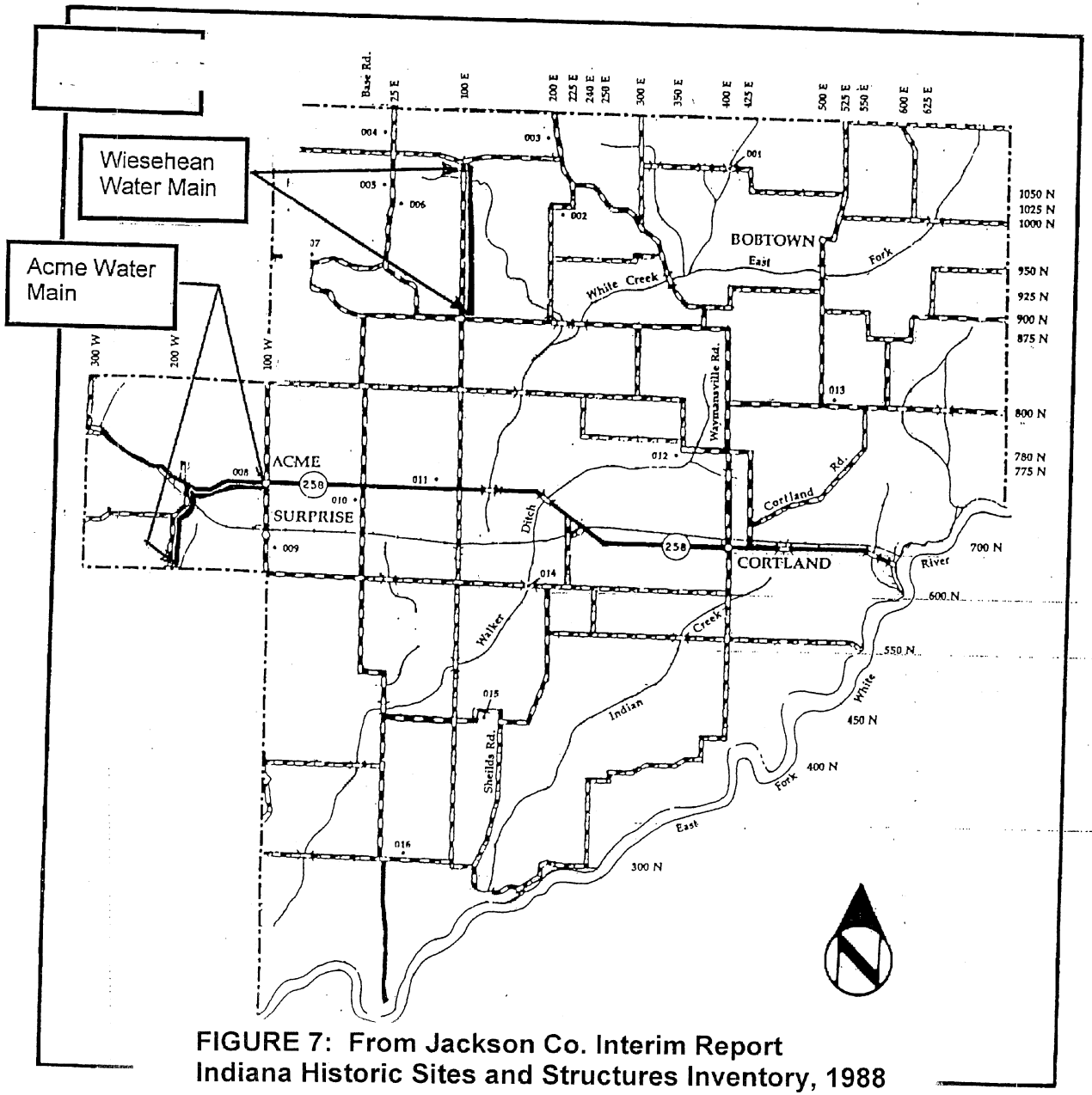

FIGURE 7: From Jackson Co. Interim Report Indiana Historic Sites and Structures Inventory, 1988

Hamilton Township is generally recognized as having the finest farmland in Jackson County. The land is relatively flat throughout the township with some hills and woodland in the north and west sections. "The Bottoms" in the southern part of the township borders on the Driftwood or East Fork of the White River. Indian Creek flows into the White River in the south and White Creek is located in the township's central and northeastern sections.

Less than ten years after the first white settlements in this area, Indiana Governor Jonathan Jennings moved the state capital from Corydon in the southern part of Indiana to Indianapolis. It is believed that his moving party, with wagons of records, furniture and equipment, stopped in Hamilton Township about one and one-half miles north of the town of Shields. The area, now commonly known as Jennings Hill, is a wooded area with a small creek nearby and was an appropriate campsite for the party which rested there for three days.

The Jennings Hill area was where James Hamilton, the township's most prominent settler, came in 1816. The Hamilton, Robertson and Brown families were all early residents who moved to Indiana from Kentucky and Virginia. When the township was formed in 1821, it was named for James Hamilton, who was also appointed the first magistrate in the township. He served as county commissioner for several terms and was elected three times to the state legislature.

The earliest area of concentrated settlement was Cortland located on the eastern edge of the township where the first mills, churches and schools were erected. Surprise and Acme were both railroad villages established during the 1880s. In fact, Surprise was so named because the founders were surprised that they would be

Brownstown Township (25001-016)

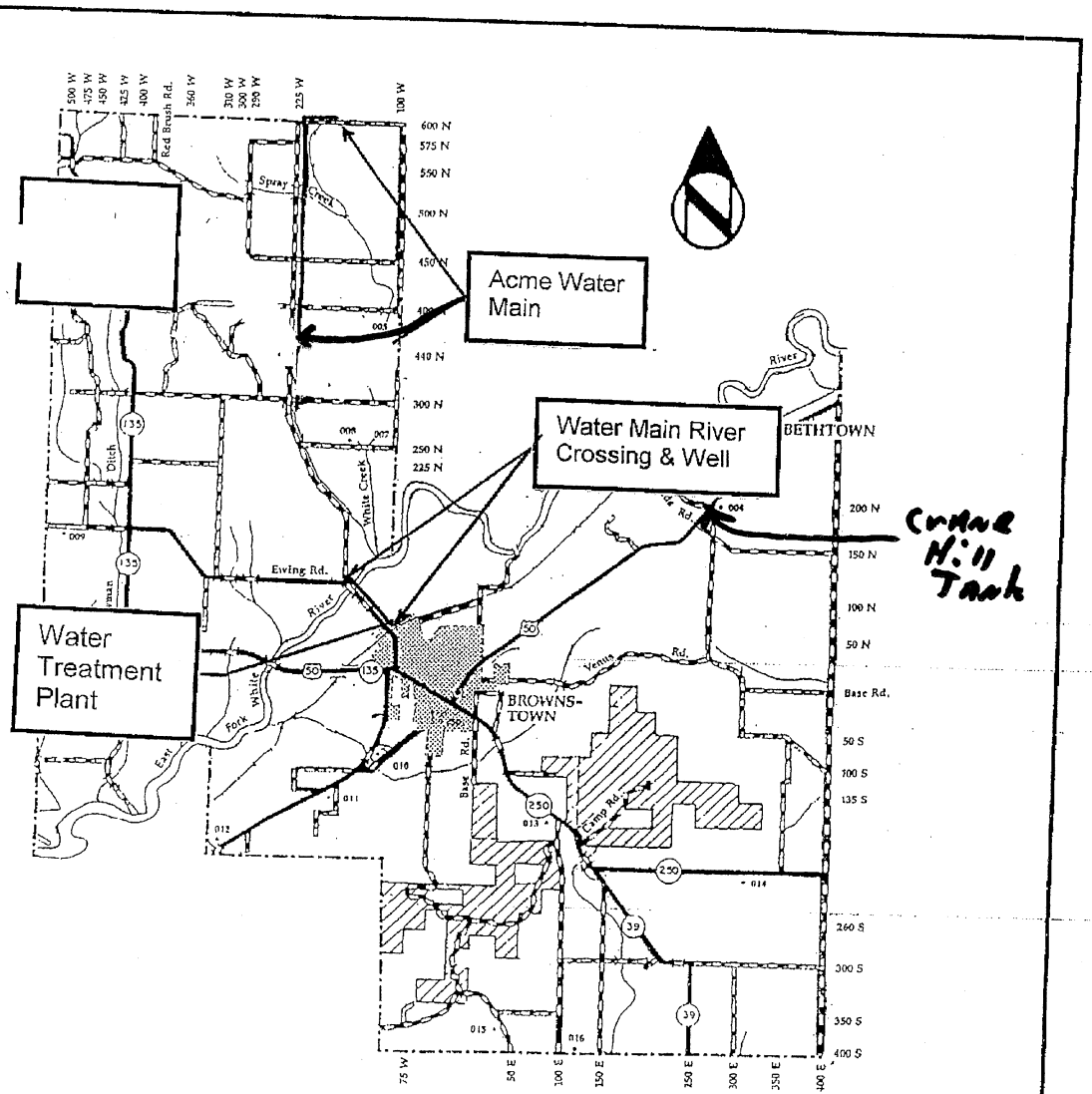

FIGURE 8: From Jackson Co. Interim Report Indiana Historic Sites and Structures Inventory, 1988

Brownstown Township is located in the geographic center of Jackson County. The township took its name from the county seat which was named for General Jacob Brown, a War of 1812 hero. The first settlement in the area in about 1811 predated the township's formation by six years. These early settlers sought refuge from hostile Indians at Huff's Fort and Ketchum's Fort. During the years 1812-1813, many of the area's residents came to the fort for protection.

The township, one of the county's three original townships, was formed in 1817. Over the years, its boundaries changed five times with additional townships formed from its land. In addition to the county seat of Brownstown, the township had three small communities within its boundaries. The oldest of the three was Elizabethtown, laid out by Asa Crane in 1836. The town grew around Crane's Mill, an early corn cracker mill on the White River. Today, no trace of the town has survived.

Ewing, located just west of Brownstown, was laid out in 1857 by William Ewing. The town successfully campaigned for a depot on the Ohio and Mississippi (O&M) Railroad, and soon Ewing had a small, thriving business district. The Ewing Mill Company, a spoke factory, and a furniture factory also were established along the O&M line. In 1899, Ewing merged with Brownstown for a school district; however, the two communities each maintained a separate business district and post office. Today a small collection of brick businesses on Main Street (29021,018,019) and a train depot (29020) remain from the town of Ewing.

The village of Shields also grew-up along the Ohio and Mississippi line. The community was laid out by William and W.W. Shields in 1866. At one time, a dam and a gristmill operated on the White River at Shields. In 1876, J.J. Daniels, a

Brownstown Scattered Sites (29001-031)

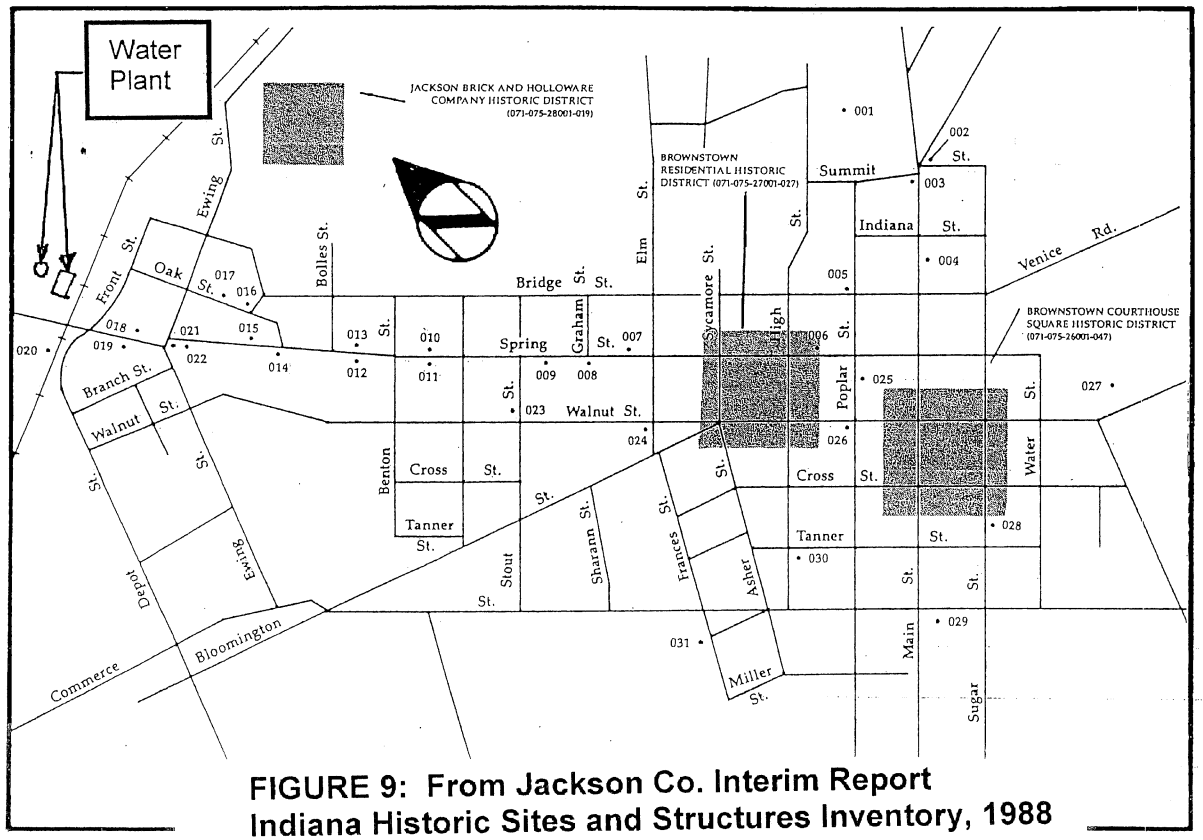

FIGURE 9: From Jackson Co. Interim Report Indiana Historic Sites and Structures Inventory, 1988

No.	Rtg.	Description
001	C	**St. Peter's Lutheran Cemetery,** off High Street; 1900-1987; Religion (075)
002	C	**House,** 501 North Main Street; Queen Anne Cottage, c.1890; Architecture (075)
003	C	**House,** North Main Street; Bungalow, c.1910; Architecture (075)
004	N	**House,** 321 North Main Street; Italianate, c.1880; Architecture (075)
005	O	**House,** 306 North Poplar Street; I-house/Greek Revival, c.1850; Architecture (075)
006	N	**House,** 118 West Spring Street; Dutch Colonial Revival, c.1920; Architecture (075)
007	C	**House,** 515 West Spring Street; Craftsman Bungalow, c.1910; Architecture (075)
008	O	**House,** 522 West Spring Street; Federal, c.1850; Architecture (075)
009	C	**House,** 614 West Spring Street; Colonial Revival, c.1920; Architecture (075)
010	N	**House,** 809 West Spring Street; Free Classic, c.1900; Architecture (075)
011	C	**House,** 814 West Spring Street; Free Classic, c.1900; Architecture (075)
012	O	**House,** 908 West Spring Street; Colonial Revival, c.1920; Architecture (075)
013	C	**House,** 915 West Spring Street; American Four-Square, c.1910; Architecture (075)
014	O	**Bolles House,** 1026 West Spring Street; Queen Anne, c.1890; Architect: C.F. Sparrell; Architecture (075)
015	C	**House,** West Spring Street; Queen Anne Cottage, c.1890; Architecture (075)
016	C	**House,** 1026 3rd Street; Gable-front, c.1900; Architecture (075)
017	C	**House,** 1037 Oak Street; Double-pen/ Italianate, c.1870; Architecture (075)
018	C	**Bolles Building,** West Spring Street; Nineteenth Century Functional, 1882; Architecture, Commerce (075)
019	C	**Commercial Building,** West Spring Street; Nineteenth Century Functional, c.1890; Architecture, Commerce (075)
020	N	**Depot,** Depot Street; Twentieth Century Functional, c.1910; Architecture, Transportation (075)
021	N	**Zabel Furniture Store,** West Spring Street; Nineteenth Century Functional, 1899; Architecture, Commerce (075)

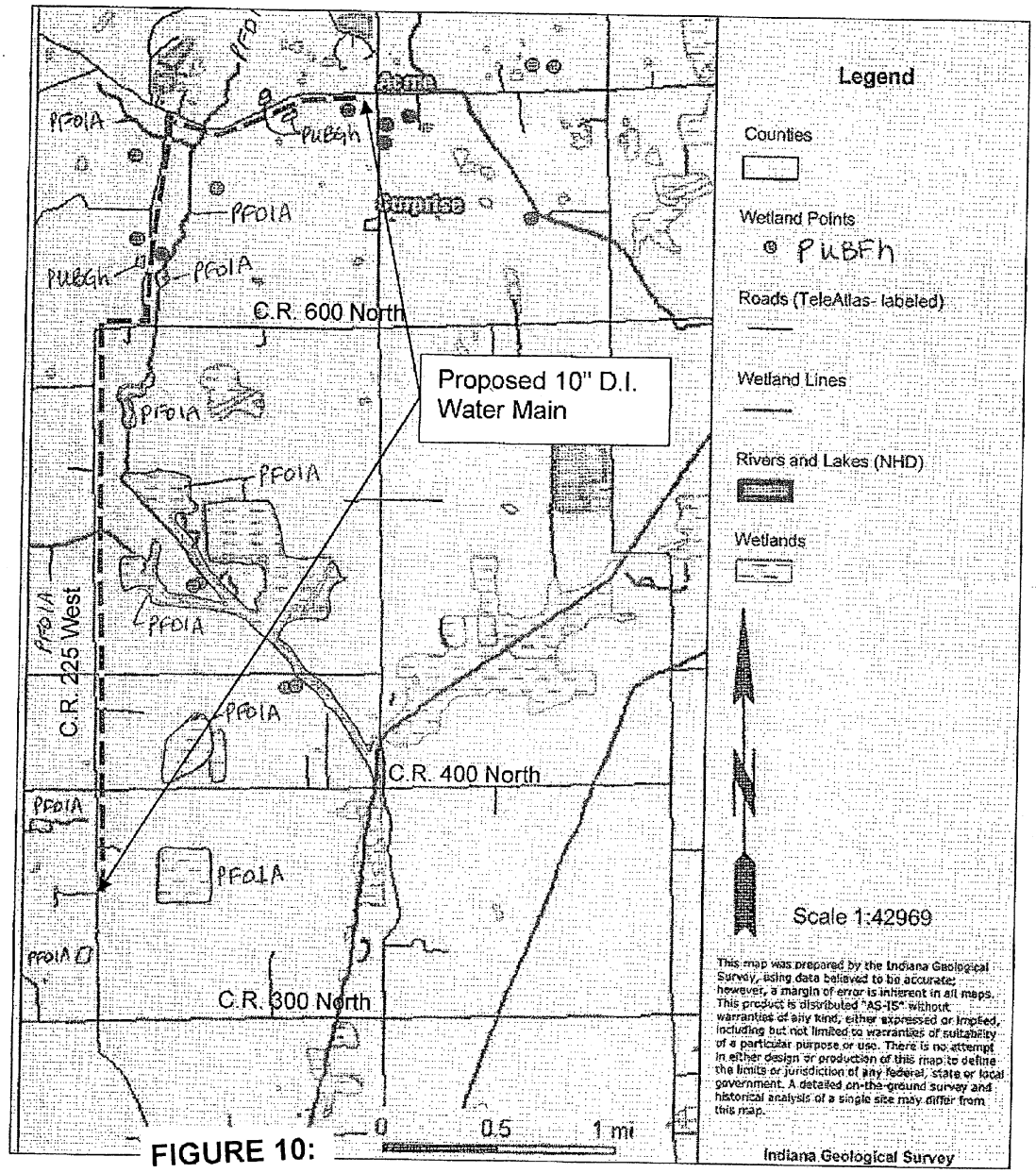

FIGURE 10:

Wetland Map for Proposed Acme Water Main
Source: GIS Atlas for Indiana
http://129.79.145.7/arcims/statewide_mxd/viewer.htm
Printed December 29, 2008
(Revised 12/29/08)

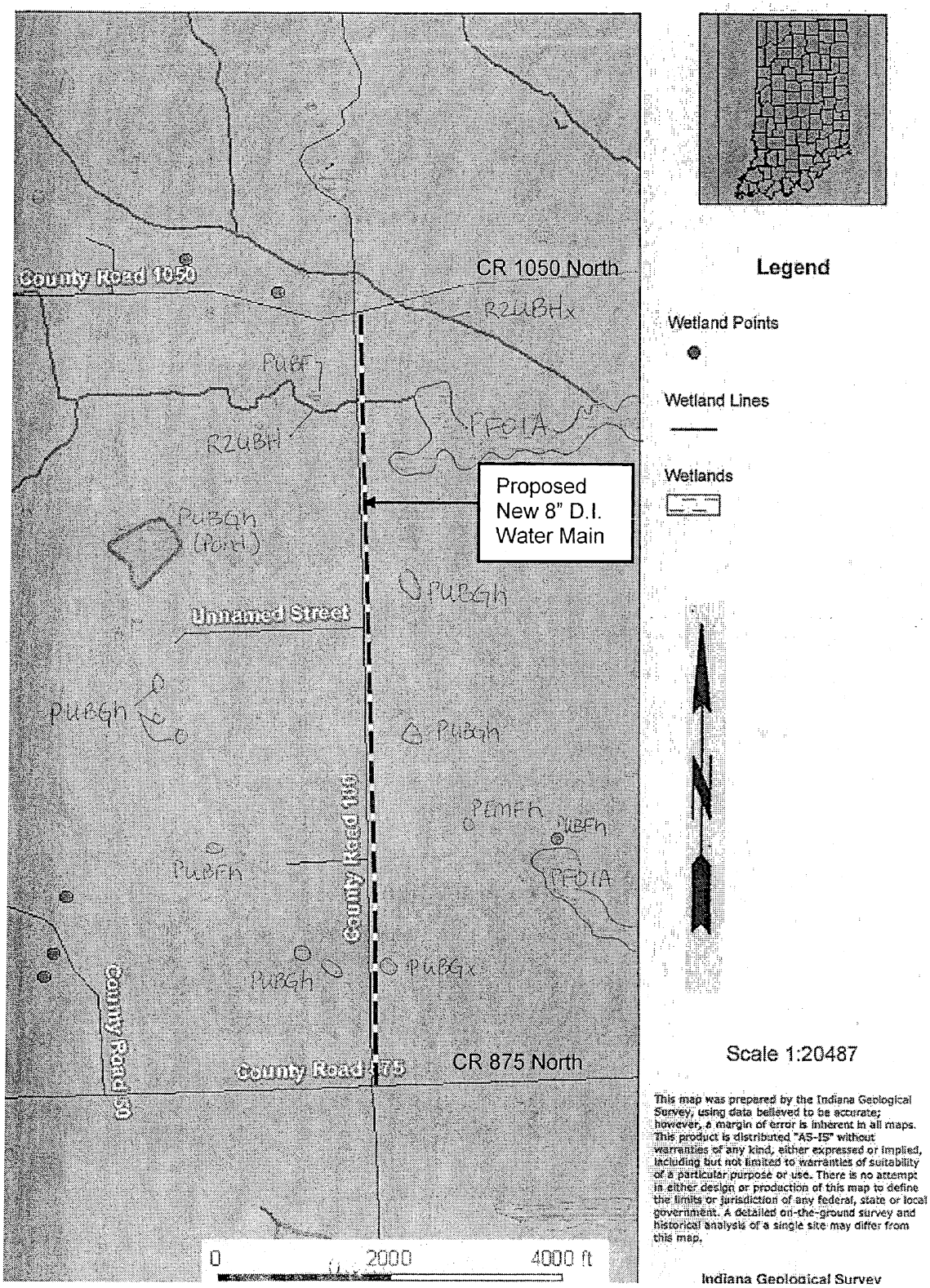

FIGURE 11:

Wetland Map for Proposed C.R. 100 East Water Main
Source: GIS Atlas for Indiana
http://129.79.145.7/arcims/statewide_mxd/viewer.htm
Printed January 23, 2008

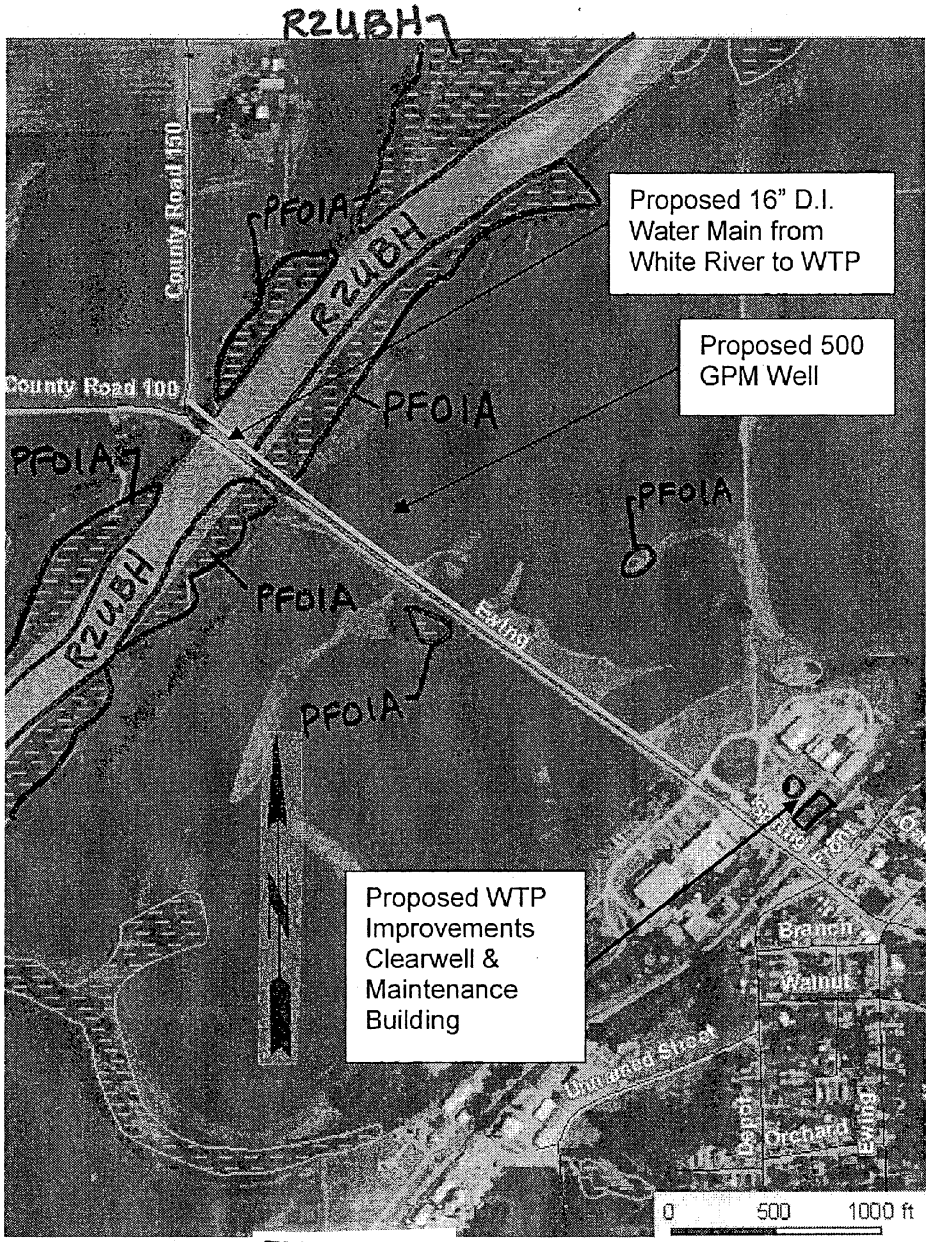

FIGURE 12:

Legend

Wetland Points

PUBFh

Wetland Lines

Wetlands

Wetland Map for Proposed Water Main Across White River and WTP Improvements
Source: GIS Atlas for Indiana

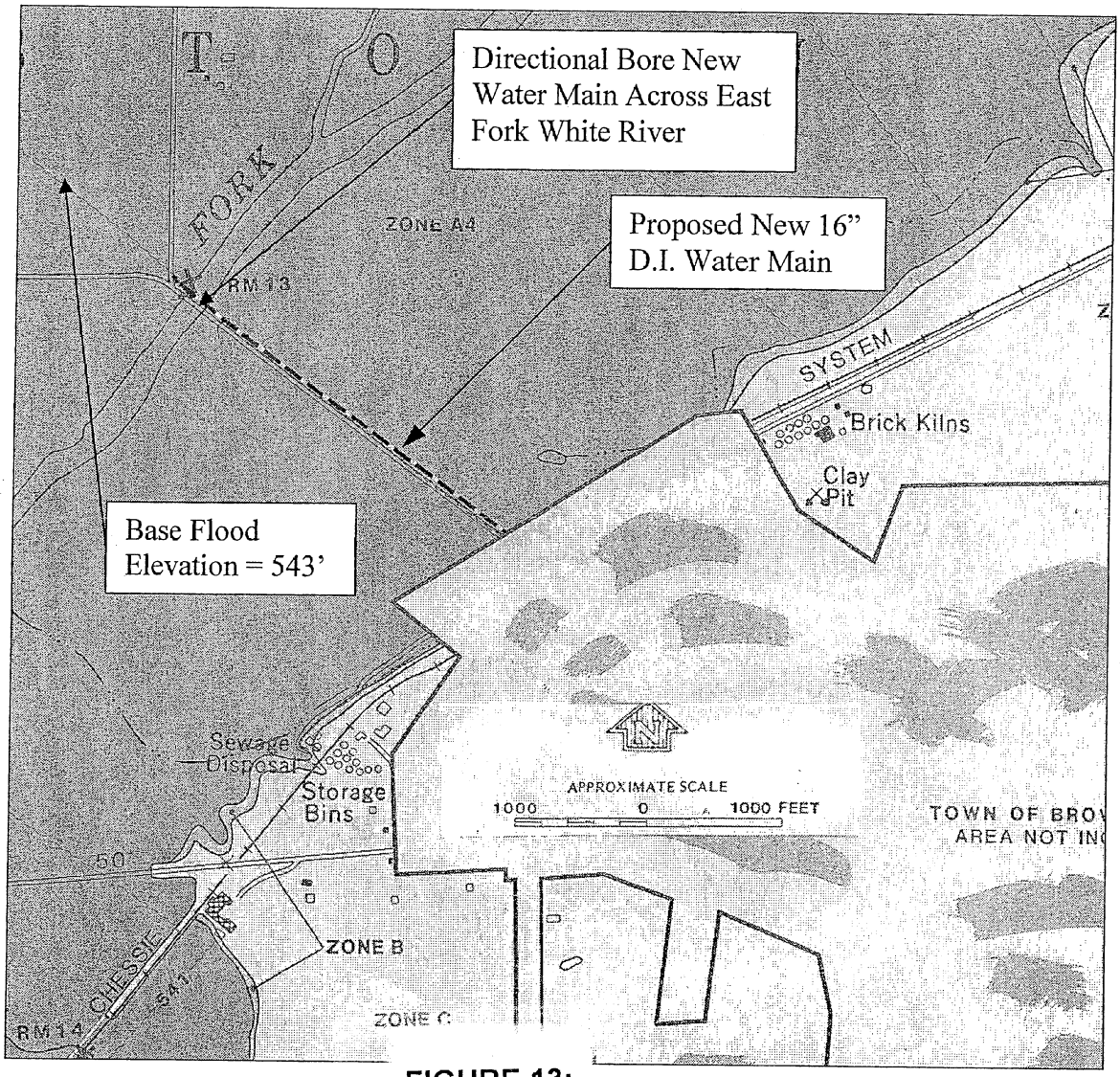

FIGURE 13:

FIRM Map: Water Main Across White River
Source: FEMA Flood Insurance Rate Map
Community Panel Number 1804050120B, Panel 120 of 225
Effective Map Date: January 5, 1984

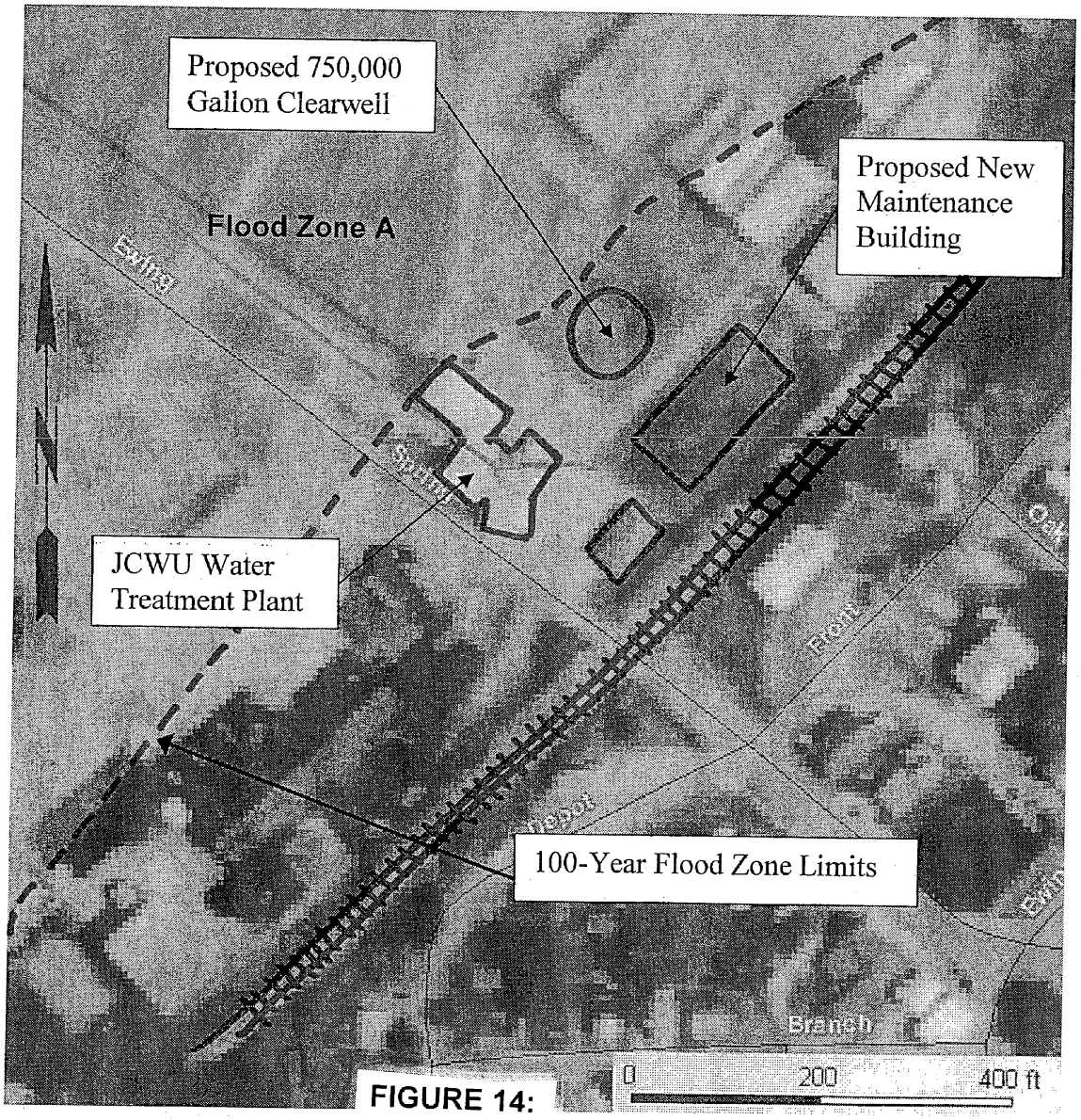

FIGURE 14:

Floodplain Map: Proposed Clearwell & Maintenance Building Area

Source: GIS Atlas for Indiana
http://129.79.145.7/arcims/statewide_mxd/viewer.htm
Printed January 19, 2008